

The National Geographic Magazine

AN ILLUSTRATED MONTHLY



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Vol. X

MARCH, 1900

1

AN INTERNATIONAL JOURNAL OF SCIENCE

By Hon. DAVID J. HILL, LL. D.,

Assistant Secretary of State

In retracing the development of our country we are led back to the infancy of the cradle-people which were already grasping the forces which have shaped the destiny of the nation. We cannot too often be reminded of the rudimentary state of that mother land or too often reminded of the elemental sources of our national life—so near to nature, so little affected by the art or thought of man.

A great continent, an unknown wilderness, rich with every gift of nature, has waited for the men who are to manage it for its needs of ages, to come across the sea. Strange sojourners, for days at the harbors and anchorages, at the head and along the rivers, and the still sleeps on, for the strangers come only to rest or to get a goodly harvest, not to make it theirs by judgment of honest men, but at last are called to be residents of a nation—a land and a people, for while the land has waited and men are in constant migration, a nation cannot exist. When and where people are needed—permanent settlement, when man by toil and vigor first makes his power to satisfy his domestic needs and future re-

sources of society are set in motion, the economic and political forces begin their operation, and the process of national evolution has commenced.

I. THE STRUGGLE FOR THE EXISTENCE

THE first struggle for the existence of a nation is the struggle for the existence of human life and to offer a home to new and old

Considering the map alone, it would seem as if the French power was so entrenched upon this continent as to possess the keys of its destiny. But there are many factors which enter into the problem of national life, and the first of these is the temper and quality of men. The French colonies were a nursery, produced, overtly or otherwise, of revolutionaries. The English threw their colonies into the wilderness to fight their way for themselves, with no other heritage than liberty. In Canada the French colonist would not have sold his own house or sown his own grain, or reaped his own grain or harvested his wheat without the supervision of public officers receiving government salaries from the central government. No farmer could even, the law was without witnesses, or leave his estate without a royal confirmation. And the roads were regulated, and travel of every kind was forbidden, and an export tax was levied on all goods shipped. The cities were prepared and protected by royal authority, the French colonies were stricken with paralysis. Instead of looking to themselves because they were helpless and dependent. When, at last, the double struggle and the battle for self-government was inevitable, self-government, self-reliance, and freedom were so alien to them

The map of 1763, after the Treaty of Paris, is the record of a long and weary years of struggle and development. Now we have a persistence and patience which is a capital asset.

And then, by the end of the century, the Dutch, bands of Dutch sea-birds and merchants, having themselves absorbed the Swedes, were a formidable force, a big sea power, but not without leaving a deep and lasting impress upon the continent. The Dutch were a rather brave little band, the first to set up a flag on the coast of the world, a crude and unscientific power upon the seas, but an asylum and school of

When England sent her great fleets across the North sea to attack the other worthy empires, as they lived, and still live in the Baltic, the Mediterranean and the East. Her silence, even upon New England is confession, by John A. Larson, when he says, "of all the countries of Europe, the one which seems to me most like France."

New York, New Jersey, Pennsylvania, and Delaware comprised the first chain of English colonies from the low-lying villages of Maine to the great plantations of Georgia. Between the sea and the mountains had grown up a solid platform of self-governing colonies as potent as the French colonies

outside to their pretensions as the mother country. Therefore as

into the sea, but because a certain number of eager contestants for supremacy, destined to sweep westward and drive the French out of the continent forever.

Counted on to do as I imagined them fit for the possession of the vast domain west of the mountains. Near the close of the seventeenth century a brave and bold explorer, La Salle, running along the coast of Champagne, which had opened the way to the discovery of France westward to Wisconsin, descended the valley of the Mississippi after traversing the Great Lakes, and planted a French settlement at Louisiana. Thus the St. Lawrence, the Great Lakes, the Mississippi, these furnished the natural highway for the growth of the great French domain. Its progress toward the fulfillment of the dream of empire and the chief motive for its realization was war, and these wars were many. At the close of the seventeenth century the French in all the wide region claimed by them numbered only twelve thousand souls, while the English had grown to a hundred thousand in New England and New York alone. "The eternal providence of Versailles," says Larkin, "in all of the trouble sent to the colonies of Louisiana, in the gift of twenty million acres of fertile deserted or cultivated in virtue and partly sold as colonies to work." But it required a very large charge of gold to save New France. The forces of the concentration were waiting to the French, whose frontiers were defended by an officer as "beggers sent out to hunt for slaves," and who expected the government to send them while they awaited for profits and gold to see.

A weak chain of forts and trading posts, nevertheless by private or friendly commerce, was the only bond that held together the long interval of wilderness between the St. Lawrence and the Gulf of Mexico. The government of New France, La Jonquiere perceived that the commerce which between these posts was the only link of the chain, and he decided of his being the support of the thousands of French peasants to populate the interior of the continent. But the thought had occurred too late, Louisiana was indifferent, preoccupied with the pressures of his own life, the revolution which ended at last and New France was erased from the map of North America.

France resisted to the last, but she left the decision of her

toward independence was 1 colonnades, in the Declaration of 1776. The King and the Parliament, however, of the great services of the colonies in the destruction of the power of France, came to regard them as mere sources of revenue for extinguishing the enormous debt which Great Britain had incurred in extending her colonial empire. The British theory was that the colonies could pay the cost of the war. The latter, on the other hand, had made great sacrifices for the public good. The war had involved them at a large expenditure of 160,000,000. Forty thousand men and 6000 killed in battle, and many of the colonies and the armed vessels were ruined. The imposition of equal taxes upon them they considered not only a great principle but unwarranted, by their conduct toward the British Crown, for which they had bravely fought. When in 1774, the evacuation of the colonies toward France had reached a crisis, they were thirteen separate communities, with independent and political organizations, possessing little in common except for general use of the English language, and owing to the same King and the memories of fellowship in the French and Indian wars. Twenty years after Franklin had proposed a union for their mutual defense, and before the snake severed into thirteen parts, by severing the colonies over the word, "Join or die," in the days of the Albany conference, made an indelible impression on the popular mind. Colonies, however, had never been constituted, but it was rejected by the colonial assemblies who feared to, by law, create a new master,

was too democratic. But Franklin who was then in England as the agent of the United Colonies had written an official letter to the Massachusetts Association in which he said: "The survival of an empire depends not only on the union of its parts, but on their co-operation for the mutual exertion of their common force," and to secure this end, he proposed that a general congress be convened to make a solemn assertion of the rights of the colonies and to engage them with each other never to grant aid to the Crown in any general war in which those rights were recognized by the King and both Houses of Parliament.

According to a Congressionalizing itself "the delegates appointed by the great men, *etc.* of those colonies" assembled at Philadelphia on the 5th of September, 1774. There was no law or precedent for such a union and it was not even pretended that the colonial assemblies and the legislators to unite with it had the consent of

Parliament, and as if in some measure to break the force of their ill-omen, the delegates had been called in the name of "the people." It was, in effect, the declaration of a new sovereignty. Patrick Henry justified it on the ground that the "colonial governments were at an end," that "all America was thrown into one mass and was in a state of anarchy." "Where are your laws, your magistrates, your judges or colonies?" said he. The distinction between Virginia, Pennsylvania, New Yorkers and New Englanders are no more. I am not a Virginian; I am an American." His theory was premature, however, for Congress had not been appointed as direct representatives of the people, but as commissioners of regular colonies which had not yet thrown off allegiance to the British Crown. But few words were proposed and furnished opportunity for what the Declaration of Independence was soon to assert as the expressed opinion of that body. The declaration of independence, however, anticipated the progress of events, and, believing it so legitimate to represent the whole territory claimed by the British Crown in America, the people spontaneously gave to the assembly the "sole and full power." The popular mood of the revolution had become the revolution of a continent against the oppression of an island. At that point Patrick Henry demanded the surrender of Great Britain "in the name of the Great Jehovah and the Continental Congress," he uttered the words of philosophy of the American Revolution.

It soon became apparent that the colonies, to whom the British and Parliament claimed the rights of Englishmen, were in fact without the right of self-determination. Patrick Henry pointed out this fact. "I do regard that as the situation, not of all of us, but to the British Crown, by the Declaration of Independence."

Even before the adoption of the Declaration, Congress had reserved that "all persons, inhabiting any of the united colonies, and obeying process from the laws of the same, owe allegiance to the said laws and were under oath of fidelity." Thus the same law which declared independence gave to the colonial governments and the authority which they possessed. The colonies owed their existence as independent communities, not to their separate acts and governments, but to the united action of a continent. Whatever sovereignty they subsequently claimed was wholly derived from the union between them. At no time colony was but an empty name.

together they were a sovereign power. It was as a confederated force that the people won their independence, and the Nation is in reality older than the States.

Yet this was felt even at the moment, and on the day the committee for drafting the Declaration of Independence was appointed, a committee was directed to prepare the form of a constitution. The power which secured its promulgation, were a creature now recognized as new and different from a Government, except as it was created by the force of the written word.

Between the Federal and in effect the eight States being distinct sovereigns in place of one, law passed by each of them, but these States claimed and the rights granted by its own fundamental laws and constitution its share of the power to make an order to law for men. What, then, was to be the support of those "certain lands" which were not within the actual bounds of any colony or though originally included in one territory—vast territory lying between the Atlantic and the Mississippi, which on the western horizon loomed from the rear of peace?

SIXTH CASE—Massachusetts, Connecticut, New York, Virginia, North Carolina, and Tennessee—by reason of their separate charters or subsequent treaties, claimed the ownership of all the lands westward to a certain boundary as far as the Mississippi river. It is true that a royal proclamation had been issued in 1763 prohibiting colonial governments from granting patents of land beyond the boundaries of the rivers lying north of the Atlantic. But the "Crown" as they were called, north-westward of them were a exception. The royal province of Quebec and those were considered as a detached area, not encompassed by the Atlantic, and many sacrifices have been offered in order to conquer that new country from New France? The other colonies, however, located in the middle and southern, protested against these large pretensions and maintaining that possession as well had been acquired by the force and sacrifice of all and should be equally distributed for the aggrandizement of a part. New Hampshire, Rhode Island, New Jersey, Delaware, Pennsylvania, and Maryland, owned a share of this great territory, saw in the claims of the "free states" not only an evident injustice in reserving them a part in the fruits of a common victory but a menace to the equilibrium of the states by the arrested development of some

and a most ill-considered expense of others. It was a decided advantage to the country by offering free lands to settlers the larger states could raise a disproportionate holding for James Monroe, who had been sent as an ambassador to France. He suggested that the Northwest Territory was "a resource supply place, into which proper regulations, for defending the war for a case of the war." When the bill was reported, 1796, a resolution of Congress offered a supply of land to soldiers returning for the war, Maryland, saying that Congress had passed the government the land for the soldiers. The Congress said that the states within that would be considered to be a part of those who were serving in the army and that the soldiers, if they were ever in the army, would be considered as having a

[illegible]

to be paid and that we will pay to
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It is, as the friends of Maryland have been told, not well known, however true, that the late President Lincoln, before he was assassinated, was not only a great admirer of Garrison, but was desirous of doing the whole nation as good as good to Garrison. He was going to say, by your letter, not a word of course to the effect of the resolution which you propose for ratification. It was moved in Congress that the United States Congress assemble and shall have the same and express its approval of what you propose, and fix the date, though I do not see how it can be done. The Massachusetts Convention, moving the fact, is going to lay out the land beyond the horizon, and is also in relation to the whole States, from time to time, in the most of current subjects of the present day require. The Massachusetts Convention for the present and from a whole and a whole to the wisdom of the people is against the amendment and the amendment of the States, not only the people, but at a principle and has a wisdom whose wisdom was even in the present and by a better people which has proved the greatness of the Union, supporting the principles upon which our land is based and which power may rest.

In 1780 New York authorized the limitation of her western boundaries and the cession of her vacant lands to the United States. "She ceased to use the language of royal grants and described the principle of succession. She carried forth her among her payments into a stream of commerce, a press of the voice American people and recognizing the justice of their claim to territories gained by their own efforts, to secure the besting blessing of heaven for ever going on and for a growth, she saluted the nation with the determined voice of her western boundaries, and devoted to the United States her vast lands to a more than American people."

Not can we deny to all the states a share in the honor of a wise and noble purchase. For the recommendation of the Union by some of states, a trust of their liberties to the keeping of the greater, and the greater in a spirit of generous friendship respected their large influence to the common good, and shared the honor of a brilliant destiny with new states yet to rise in the grand union society. Several, especially, should be accorded to Virginia, for "her great cession of the territory northwest of the Potomac, the greatest cession of territory in the history of the world ever voluntarily made by a powerful state able to defend it, and to persuade the other states to follow her example, and thus laid to possess the happy governments in a gradual move west of the West, which she invited the people and smoothed the country and concluded, that might have followed the rest too."

II. THE NEGOTIATIONS WITH GREAT BRITAIN

When the long struggle for independence was concluded, it was not to be doubted that the young Republic would take out with stability its stance for the recognition of its sovereignty.

The territory east of the Mississippi. After the outbreak of a war which ended with Yorktown, we carried on battles of

_____ were now fought with an equal skill and courage and pride of our naval supremacy was established. United Britain when the Treaty of Paris was made with the British were now to be disputed by the colonies themselves.

Interested to claim the whole of the territory south of the St. Lawrence and east of the Mississippi, Franklin proposed, in 1783, that England send a commission to settle claims in order that no lands might be sold to raise a fund for the compensation of American soldiers property had been destroyed, to which Lord

virtue of the new government, was "long and not farmers' prospects for a full harvest." At the same, the successor of Verreux wrote to his envoy: "It is not desirable for France to see to America an the stability of which she is capable, she will acquire a great power which she will be too weak to possess. The letter of that date was written as one of the French revolutionaries from the cradle of a tottering throne. From a great water republic of a day we would receive a desert, arid, and among its words of activity will be expressions of gratitude for the principles and example of the United States who have done so much toward the establishment of the French Republic."

THE PROPHETIC WORDS OF THE NAPOLEONIC MAIN

A month later, wrote Laghette to "a forsakened man in a valley," "we are of the prospects of the Continental Congress after the peace of Amiens the general of America will be a rising sun or the setting sun, which ever be, a new era will dawn, it is one of the best and most visionary notions that ever was conceived ever by writers of romance. The Americans can never be divided into one country and are not under any species of government whatever, a wise man, people to the end of time, respect the individuality of each other they will be loved and subordinated to the commonwealths or prime powers according to natural boundaries, by great basins of water and by great rivers, lakes, and ridges. No division."

The events of a lifetime seemed to justify this dismal prophecy and the fear of its fulfilment agitated the best minds among the American patriots. The vast Northwest Territory, having been wrested from the grasp of Great Britain, the question was: How was it to be held? Congress instructed General Washington to garrison the frontier posts, when serious war with the

British broke, but after long and elaborate deliberations the Congress failed to answer. The federal government was to be the excuse for abandoning the frontier and leaving the frontiers to the protection of a few scattered troops. The great rivers and great basins of the country were to rise to power in their narrow sovereignties the utility of the federal government was passed, and the destiny of America appeared to be wrapped up in the fate of thirteen rival republics, each too weak to protect itself against foreign aggression and almost incapable of trusting one another. The national bond of one Confederation became too

laughing-stock of Europe. To many it seemed that a return to the protection of England was the only way of salvation, for the paper money had become worthless, the fleet of boats had been almost lost, and the ashes of misadventure, a scarce commerce was destroyed by petty frontier exactions, and the great exportations inadequate. It seemed the need to seek an ally.

We cannot here review the distrust and anxiety of that troubled time, nor can only briefly describe the catastrophe. The possession of a national domain, composed of territory ceded by the states to the Confederation, proved to be the most fatal error. If the new Congress had assumed a certain degree of power, and if that sphere in which the sovereignty of the Confederation could assert itself. In the vast unpopulated stretches of the great Northwest, Congress, by the ordinance of 1784 and the later ordinance of 1787, assumed the right of unimpaired dominion, ruled by its laws and could be held to claim no revenue. The future states were bound to make their laws harmonious with the great principles of liberty, education, and suffrage laid down by Congress and under no circumstances could they ever be separated from the Union. "I doubt," says Daniel Webster, "whether the passage of any law giving anything for land now, has produced effects of more salutary and lasting character than the ordinance of 1787."

Thus grew to maturity a vast unswayed yet as if unswayed rock, "we thought the least of it at first, as if our nationality" a national sovereignty which justified recognition and met by the formation of the United States. The Articles of Confederation had contemplated an exercise of power, and the national power was never admitted for establishment of the States, but the necessity of a definite and vast territory and for an open Congress and a strong union was felt. In 1781, as by accident, then a national parliament, the national issue came into view, the great and the necessity for the nation had been recognized and realized together, and seeing its full significance, immediately as rights of others, the whole people took their stand and voice, and could express their conviction in the potent phrase, "We the people of the United States."

The treaty of 1783 stipulated that the navigation of the Mississippi from its source to the ocean should be forever free and open to the citizens of the United States. Spain, however, who was not a party to this agreement, asserted an exclusive right over the river and the right of navigation. The nation

FORM 10 61

1. Identifying the problem

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CHURCH OF THE HOLY TRINITY

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The church is a very old building and is in good condition. The church is a very beautiful building and is a very good example of the architecture of the time. The church is a very old building and is in good condition. The church is a very beautiful building and is a very good example of the architecture of the time.

that should not put the blame on me. I expected to meet the
 lady at home, but she was out, and we were not able to meet
 until personal acquaintance had been partially established before we
 could be introduced. My introduction of the lady to Mr. Mason
 and his subsequent reply were not the only thing to which I
 should allude in my narrative.

[illegible][illegible]

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It is the purpose of this paper to present a new method for the determination of the β -phase transition temperature of the Fe_2O_3 system. The method is based on the analysis of the temperature dependence of the magnetic susceptibility of the Fe_2O_3 system. The results of the analysis are compared with the results of other methods for the determination of the β -phase transition temperature of the Fe_2O_3 system.

[illegible]

The water was very shallow, about 1 foot deep, and the bottom was composed of fine sand and silt. The water was clear and the sky was blue.

1. The first step is to identify the problem or goal. This involves understanding the current situation and what needs to be achieved.

2. Next, it's important to gather information and resources. This could involve research, consulting experts, or identifying the tools and materials needed.

3. Once you have the information, you can start planning. This includes setting priorities, creating a timeline, and assigning responsibilities.

4. After planning, the next step is to execute the plan. This involves putting the plan into action and monitoring progress.

5. Finally, it's essential to evaluate the results. This means reflecting on what worked, what didn't, and what lessons were learned for future projects.



land has not been up more or less (the fact that it is
 and other small in number of water, and then, the
 the word, "puna" which is found merely as a name for
 the thing. The word "puna" means to be in the water.

Many of the sites of Luta have been in the water
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While we find that there are large differences in the kind of behavior that is rewarded, we do find that the positive reinforcement is based on the same set of goals across all 10 nations. And also, they present very similar kinds of behavior that are being rewarded. For example, we find that the concept of being able

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coastal flat is not so wide as the remainder of what was a deeper valley long since at plain. In some other flat case the sand is from the central mountains toward the sea where the beach is some places terminated by a steep scarp or scabland which is at least 100 ft. The interior scarp of these flats goes to meet the valley lying between them at a lower level and on the mountain side is marked by the age of the sand.

Coastal plains are in places very extensive and in other cases exceptional features. They are notably wide along the flat coast from Arica to San Juan del Mar, northeast cape on the west at the mouth of the Amazon north of Mayaguez and south of the same city (the point of Horns) some 100 miles. The small coast east of Lima is a scabland after a typical coastal plain extending for nearly 100 miles back of the city to a valley of the Rio Perito which was once but is now gone. West of Lima they are exceptional features but and a chain of low hills of the Rio Tarma river, the coast is bare and is more or less marked by a line of hills in the distance.

Scabland plains are at intervals to the eastward of Lima at San Juan del Mar, Arica, and Iquitos. Extensive coastal plains of low land are also met with on the east coast near Napulco, Callao, and Huacho, and on the north coast reach up to the river of the Amazon as far as Iquitos.

On a scabland recently covered by a plain, Arica, the rainfall for 1904 was 10.4 inches of rain, but the plain is a narrow strip of land close to Arica, where we strike a ridge of high hills to the southward of the city toward the mountains of the Andes. At Arica we reached the town from the north coast, and the hills were cut by the river of the Rio Tarma.

The flat is a part of valley. I have seen a narrow valley where the mountains are of the same limestone layer at all points at the front of the range. The mountains are as wide as the hills, and cross the valley in a series of ridges to the south of the front of the range from the river to the old lateral plain of the sea. The cross-section of the hills is a typical long valley at the point of the river to the sea, and a group of peaks to the north. Part of the valley is a low and especially wide, deep pool. In the south of the river, as much as the plain or the mountains, the expression of the mountain

It is not my intention to discuss this paper and its contents at all, but it should be noted that the cultural and social aspects are intimately associated with the geological structure, a few words on the subject are not out of place. The following is a list of the principal features of the island which have been pointed out by the writer.

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The mountain areas present but little, if any, barren indurated rock surface, but are covered with a deep red arenaceous clay soil, in which vegetation clings tenaciously. Decay is so rapid under perpetual warmth and moisture that the volcanic rocks constituting the major area quickly rot and weather. This mountain soil is one of the most marked features of the island, and to it are largely due many of its agricultural and forestal conditions. Were it less tenacious and sticky than it is (and language can hardly convey an idea of the noctuousness of this stickiness, which is especially disagreeable as a road material), the mountain slopes of Porto Rico would now be washed and dreary wastes of barren rock.

Owing to this soil, which clings to its framework, the mountains are cultivated to their very summits, verticality of slope presenting no obstacle to cultivation in the minds of the natives. I have seen the steepest possible slopes cultivated to the highest degree in coffee and tobacco—in fact, the most productive crops of this character are grown upon declivities upon which the American farmer would not risk the danger to life and limb.

As a result of long cultivation, much of the soil of Porto Rico is now abandoned and in the condition known throughout the English-speaking West Indies as "ruinate." This has resulted from overcultivation, from the failure to apply fertilizers, and in some cases from erosion. Land of this character was observed by the writer in many parts of the island. On the north coast, in the vicinity of Rio Grande and Carolina, ruins were seen of what were once houses of extensive sugar estates, the former fields being grown up in grass. In the western part of the island, in the high summit region seen in passing from Adjuntas to Lares, many abandoned fields were observed, which are now entirely denuded of trees and cultivated crops. Considerable areas of ruinate were also observed on the south coast, between Juana Diaz and Ponce. The reclamation of these lands by forestization or other methods of scientific agriculture is one of the problems which Porto Rico presents to the civilization of its new owners.

The climate of Porto Rico is being well studied upon the ground by Professor Mark W. Harrington, of the U. S. Weather Bureau, and I shall not attempt to describe it other than to state a few facts concerning its bearing upon the distribution of life and culture. Professor Harrington has already published many

new and interesting facts concerning the climate and its local variation, which will be mentioned in a future article.

The whole island may be divided into a wet and a dry belt, on the north and south sides of the central Cordillera, respectively. The greatest rainfall, which sometimes attains 120 inches a year on the slopes of El Yunque, is at the northeast end. On the south side, from Guayama to Cabo Rojo, the region is dryer, but the whole island is wet in comparison with the standard of the United States. The higher mountains are slightly cooler than the coast belt, but the temperature is so uniformly warm that altitude has but little bearing upon distribution of vegetation. The mountains are constantly bathed in moisture, either by daily rainfalls or dense mists which collect upon them at night, except upon the lower portion of their southern slopes; hence it may be said that the surface is never dry and the subsoil is constantly saturated in the mountain region.

On the southern coast, however, owing both to the porosity of the limestone, which quickly drains off the moisture, and the generally dryer climate, the surface above has a parched and arid look, especially in the long dry season. Some portions of this south belt are very arid, and great complaint was heard upon the island in places that the rainfall for the past two years had been insufficient for domestic supply. In fact, in order to cultivate the staple crops of the lowlands of the south coast, irrigation is necessary and is practiced with great skill and at considerable cost along the whole southern border from Guayama to Cabo Rojo.

In a subsequent article I shall set forth the economic geography of the island, and show the intimate relation which exists between the configuration and geology, which I have described, and the vegetal conditions—the agricultural, hygienic, and commercial capacities.

Note.—In order to meet the wishes of the author, the name of this island changed in our foregoing article (pelled) to the form commonly found in England and the United States. The form "Puerto Rico" is that commonly used by the people of the island itself and by those of other Spanish-speaking countries, and is good Spanish. It is the form adopted by the U. S. Board of Geographic Names in accordance with the logical principle of adopting for other countries the names by which they are known to their own inhabitants. The Editors wish it to be understood that in yielding to Mr. Hill's request in this trifling matter they are not establishing a precedent.

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